

What is claimed is:

- [Claim 1]** 1. A method of dicing a wafer, comprising:
providing a carrier, the carrier consecutively having a bonding layer and an extendable film positioned thereon;
providing a wafer, and bonding the wafer to the extendable film through a bottom surface of the wafer;
performing a dicing process to dice the wafer into a plurality of dies; and
separating the extendable film from the carrier.
- [Claim 2]** 2. The method of claim 1, wherein the bonding layer is a heat sensitive tape.
- [Claim 3]** 3. The method of claim 2, wherein separating the extendable film from the carrier is implemented by heating.
- [Claim 4]** 4. The method of claim 3, wherein the extendable film is an extendable tape, and the melting point of the extendable tape is higher than the melting point of the heat sensitive tape.
- [Claim 5]** 5. The method of claim 1, wherein the bonding layer is a UV tape.
- [Claim 6]** 6. The method of claim 5, wherein separating the extendable film from the carrier is implemented by UV curing.
- [Claim 7]** 7. The method of claim 6, wherein the extendable film is an extendable tape.

[Claim 8] 8. The method of claim 1, wherein the dicing process comprises:
forming a photoresist pattern on a top surface of the wafer to define scribe lines of the wafer; and
performing an anisotropic etching process to remove the wafer uncovered by the photoresist pattern.

[Claim 9] 9. The method of claim 8, further comprising removing the photoresist pattern after the dicing process is finished.

[Claim 10] 10. The method of claim 1, further comprising performing a wafer expansion and wafer sorting process after the extendable film is separated from the carrier.

[Claim 11] 11. A method of dicing a wafer, comprising:
providing a wafer, the wafer being supported by a carrier; and a bonding layer and an extendable film being positioned between the carrier and the wafer;
forming a photoresist pattern on a surface of the wafer to define scribe lines of the wafer;
performing an anisotropic etching process to remove the wafer uncovered by the photoresist pattern to form a plurality of dies;
and
separating the bonding layer from the carrier.

[Claim 12] 12. The method of claim 11, wherein the bonding layer is a heat sensitive tape.

[Claim 13] 13. The method of claim 12, wherein separating the extendable film from the carrier is implemented by heating.

[Claim 14] 14. The method of claim 13, wherein the extendable film is an extendable tape, and the melting point of the extendable tape is higher than the melting point of the heat sensitive tape.

[Claim 15] 15. The method of claim 11, wherein the bonding layer is a UV tape.

[Claim 16] 16. The method of claim 15, wherein separating the extendable film from the carrier is implemented by UV curing.

[Claim 17] 17. The method of claim 16, wherein the extendable film is an extendable tape.

[Claim 18] 18. The method of claim 11, further comprising removing the photoresist pattern after the anisotropic etching process is finished.

[Claim 19] 19. The method of claim 11, further comprising performing a wafer expansion and wafer sorting process after the bonding layer is separated from the carrier.